

her lofty breed from destruction, just as the top of a parsley sprig does for the swallows. This stone worn by a woman round her neck during pregnancy will procure her a living child."

This use of parsley is mentioned by *Ælianus de Natura Animal.* lib. i. chap. 37, as follows:—

Αἱ σίλφαι καὶ τούτων τὰ ὠὰ ἀδικούσιν οὐκοῦν αἱ μητέρες σεῖλον καὶ κέρην προβάλλονται τῶν βρεφῶν καὶ ἐκείναις τὸ ἐντεῦθεν ἕβρατά ἐστίν.

"As the beetles injure their eggs the mothers throw tops of parsley sprigs in front of their young, which become inaccessible to the beetles."

But this parsley must not be confounded with the miraculous herb giving sight to the young swallows. (*Ælianus*, lib. iii. chap. 25).

Βραδέως δὲ ἐκβλέπει καὶ τὰ ταύτης βρέφη ὡς καὶ τὰ τῶν κυνῶν σκυλαῖα· πᾶν δὲ κομίζει καὶ προσάγει τὰ δὲ ἀναβαλέει εἰτα ἀτρεμήσαντα ὀλιγὸν ἐκπετήσιμα ὅντα πρόεισι τῆς καλῆς ἐπὶ τὴν νομήν. ταύτης τῆς πᾶς ἀνθρωπῶι γενέσθαι ἐγκρατεῖς διδάσκει· καὶ οὐδέπω νῦν τῆς σπουδῆς κατέτυχον.

"Like whelps, the young swallows are late endowed with sight, but on the application of a certain herb by their mother they begin to see; and after some rest leave the nest to seek their food. Men, though longing for this herb, could never get it."

Dionysius gives in his "Ornithology" some information about this eagle's stone (lib. i. ch. 3).

Ἦν δὲ ἀποτεκεῖν δὴ κομισάντες τινα λίθον ταῖς κοίλαις ἐντιθέας καλιαῖς ἵνα ἐν καιρῷ τίκτωσι, καὶ μὴ τὸ τικτόμενον πρὸ τῆς ὄρας ἀπέλκτον ὄντο ὑπὲρ τοῦ ἰσχύος· οὐ μὴν ἐστὶ τί σάφες περὶ τοῦ λίθου τούτου γινώσκουσιν, ἀλλ' οἱ μὲν αὐτὸν ἀπὸ τῶν Κανκασίων ὄρων οἱ δὲ ἀπὸ τῆς τοῦ ὠκεανοῦ ὄχης φασὶ κομίζεσθαι λευκὸν ὑπερφύως ὄντα καὶ μεστέον ἐνδοθεὶν πνεύματος ὡς καὶ ἔχον ἀποτελεῖν εἰ κινεῖτο, τικτούσης δ' εἰ τις αὐτὸν γυναικὶ περιάψει, δισσθαίνειν διακαλῶσαι τὸ βρέφος, κἂν ἐνλέβηται παφλάζοντος ὕδατος ἐπιψάσῃ τὴν τοῦ πυρὸς νίκησει πάντω ἰσχύον.

"They bring this stone in their nests to avoid a premature and forcible delivery. Nothing positive is known about this stone, which some suppose brought from the Caucasus, and others from the sea-shore. It is exceedingly white, full of air, so as to resound when moved. It prevents miscarriage in those who wear it. And if it does but touch the surface of a caldron of boiling water, it overpowers entirely the might of fire."

The confusion made by some writers between swallows and eagles is evident by the fact of their faulty quotation from Pliny.

For Pliny, chap. iv. lib. x. says—

"Tribus primis et quinto aquilarum generi inædificatur nido lapis atites quem aliqui dixere gangitem ad multa remedia utilis nihil igne dependens. Est autem lapis iste prægnans intus, cum quatias alio velut in utero sonante. Sed vis illa medica non nisi nido direptis."

And in chap. xxxix. vol. 36, he gives further particulars on these very stones, which he divides into males and females, and into four kinds, according to their origin.

Whilst in lib. viii. chap. 41, he says—

"Chelidonium visui saluberrimum hirundines monstraverat vexatis pullorum oculis illa medentes," and lib. xxv. ch. 50, "Animalia quoque invenere herbas, in primis que chelidonium. Hac enim hirundines oculis pullorum in nido restituant visum ut quidam volunt [see Aristotle *de Animal.* Gen. i. iv. ch. 6] etiam erutis oculis"; clearly tracing the distinction followed by Philo between the respective proficiency of eagles in geology and swallows in botany.

Jersey

CHATEL

A Peat Bed in the Drift of Oldham

WE have here lately discovered a bed of peat intercalated with beds of undisturbed "glacial drift." I believe this phenomenon, if not unique, is very rare in England, and may, therefore, be interesting to your readers. In the depth of a section of 14 feet there are two thick beds of drift with washings of fine clay, and, midway in the section, a well defined bed of peat with a maximum thickness of 18 inches. Another bed of peat, somewhat less clearly defined, and not so true as the former, is likewise present, the two beds having beneath them a thin band of exceedingly fine clay of a bluish grey colour, which evidently is the equivalent of the "seatings" or "floor clays," which so invariably accompany our seams of coal. The beds of drift that inclose the peat are alike in some of their main features, but unlike in others. In both boulders are in great abundance.

In the bed beneath the peat there are bands of fine clay, coarse sand, or grit, pebbles, and boulders; the upper, with very little variation, is uniformly made up of arenaceous clay and a great number of boulders. It is almost certain that at the close of the pleistocene period the upper deposit, that is, the one above the peat, could not have had a thickness of less than 75 feet. These deposits are the "upper drift" of the geologist. The beds beneath the peat, judging from their composition—boulders, pebbles, gravel, and fine sand—and the presence in the latter of "current bedding," probably represent the "middle drift." The "lower drift" beds are absent here. May I add that some of the mosses, which seem to make up the bulk of the peat, are in an excellent state of preservation, and are now under examination for identification. A considerable number of fragments of beetles, of undetermined species, are likewise amongst the finds.

JAS. NIELD

29, Radclyffe Street, Oldham, September 13

On the Asiatic Alliances of the Fauna of the Congenian Deposits of South-Eastern Europe

HERR THEODOR FUCHS of Vienna has pointed out some important mistakes in the abstracts of his memoir in *NATURE*, vol. xxi. p. 528. In view of remedying these regrettable errors some revised extracts are here given. At p. 528, line 32, the passage should read thus:—"The genus *Neritina* at present shows a predilection for islands. Thus from Tahiti alone Reeve gives 8 species, and 11 from the Sandwich Islands; from the Philippines there are 39, and 40 from New Caledonia alone, according to Gassies. Further, according to Kobelt there are 11 in the Mediterranean; and, according to Reeve, 7 in the West Indies, and 10 in Central America. The great continental areas are strangely poor in *Neritina*. In North America the genus seems to be wanting, since the two or three known species are found only in the borderlands on the south. The genus *Melanopsis* has a very peculiar distribution. Twenty species, nearly all strongly ornamented, belong to the Mediterranean. This genus is wanting in Africa, East India, the Malay Islands, Australia, and the whole of America; but it occurs quite locally, with 19 species, in New Caledonia; and 2 species are found in New Zealand."

Again, at line 60, read:—"A very peculiar characteristic, hitherto overlooked, in the inland-water faunas of the later tertiaries in South Europe, is the absence of the African element (such as the *Achatina*, *Etheria*, *Ampullaria*, *Iridina*, *Galatea*, &c.); and this is the more remarkable because the mammalian fauna of the period, on the contrary, has a strongly-pronounced African character. The same may be said of the flora and for the whole tertiary period, since the tertiary flora of Europe had, in succession, an Australian, Indian, Japanese, and Mediterranean character, but never an African character. The tertiary land and freshwater shells of Europe show analogies to New Caledonia, India, China, and Japan, but not to Africa; although the last not only lies so very much nearer to our continent, but in its mammalian fauna, until the Diluvial period, kept so close a connection with Southern Europe."

T. R. J.

Prosopistoma punctifrons

My colleagues, Messrs. Joly and Vayssière, in announcing with justifiable pride (in the *Comptes Rendus* of the French Academy and elsewhere) the discovery of the perfect insect of *Prosopistoma*, attribute to me the former possession of an opinion that the insect might be an Ephemeroidea suited for a continuous aquatic life. I am not sensible of having published such an opinion, nor of having held it. In remarks on *Oniscigaster*, in the *Journal* of the Linnean Society of London, vol. xii. (Zoology) p. 145, footnote (1873), I ask, "Can there be apterous Ephemeroidea?" and "Can the imago of *Prosopistoma* be in that condition?" It did not occur to me that these words could be so translated as to bear the interpretation put upon them by Messrs. Joly and Vayssière. In congratulating my colleagues upon their discovery, I remark that I make this explanation solely because certain of my correspondents ask where I have published the opinion attributed to me.

R. McLACHLAN

Lewisham, September 9

Mosquitoes

IN *NATURE*, vol. xxii. p. 338, an inquiry is made as to the best means of preventing the attacks of mosquitoes. I am

informed that the smell of American pennyroyal (*Hedeoma pulegioides*), when sufficiently strong, drives them away at once. A few drops of the essential oil extracted from this plant added to an ointment and rubbed upon the skin will secure relief from these pests; likewise a sleeping apartment may be freed from them by strewing about a quantity of the leaves of the plant; or by allowing a quantity of the essential oil to evaporate in it. European pennyroyal (*Mentha pulegium*) is said to be very similar, and might possibly have the same effect.

Lyons, New York, August 30

M. A. VEEDER

Hardening of Steel

IN NATURE, vol. xxii. p. 220, Mr. H. T. Johnston-Laris supposes the absorption of hydrogen to be necessary for steel to get hard.

The following facts seem to prove that this absorption can be very well dispensed with in hardening:—

1. Small pieces of steel wire can be hardened by moving them swiftly through the air when red hot, or by pressing them against a piece of cold metal.

2. Steel can be hardened very well by cooling in quicksilver.

Both facts seem to state that only rapid cooling is wanted for steel to get hard.

T. W. GILTAY

Dordrecht, September 8

THE NEW ZEALAND INSTITUTE

PROBABLY none of our colonies have done so much for the promotion of the higher interests of their people as New Zealand; in this respect, indeed, it will compare favourably with almost any other country in the world. Its university is wonderfully complete and well organised; all the faculties are well represented; science, as well as literature, has its right place in the curriculum; the best men are tempted to go out as professors from the old country; and laboratory research is fairly encouraged. Quite recently we referred to a proposed system of education, which in its comprehensiveness and completeness will hold its own with any national system of education in Europe. The New Zealand Institute, again, is probably one of the best organised, and for its purpose, among the most efficient scientific bodies to be found anywhere. It is virtually a Government institution, and was organised by a special Act in 1867. It seems to bear the same relation to its incorporated societies that a university does to its affiliated colleges; it is independent of these societies, which must comply with certain rules imposed upon them by the Institute, and yet without these societies its occupation would seem to be gone. One part of its duty is the publication of summaries of the *Proceedings* of the societies, and of such papers and records in full as the Institute may deem of permanent scientific value. The societies at present incorporated with the Institute are the Wellington Philosophical Society, the Auckland Institute, the Philosophical Institute of Canterbury, the Otago Institute, the Westland Institute, and the Hawkes Bay Philosophical Institute. It must be gratifying in the highest degree to those who have the best interests of New Zealand at heart to find a love for culture so widespread as the existence of these societies indicate. And it must be remembered that, as a condition of incorporation with the Institute, each society must come up to a certain standard of membership and contribute a considerable sum yearly to the promotion of science, art, and literature, which is the aim of the Institute.

The genuine good work which the Institute is doing, and its efficiency in promoting not only science, but through that the practical interests of the colony, is evident from the handsome volume of *Transactions* which it publishes yearly, and which are entitled to take their place among the best class of similar publications. Some idea of the work which the Institute is doing, and of the value of its *Transactions*, may be obtained from

the two last volumes, for 1878 and 1879, which we have just received.

Of course the first aim of a society like this, in a fresh country like New Zealand, should be the working out of its natural history (in its widest sense) in a scientific method. This the Institute has done and is doing, and its publications, and the publications of the separate societies, are already a mine of information on all subjects connected with New Zealand. The volumes before us contain a large number of papers on zoology, botany, chemistry, and geology, all of them important contributions to these various departments of science. Prof. Hutton, whose name is well known in this country, contributes a number of valuable papers on the various divisions of the fauna of New Zealand. Prof. von Haast (another name well known to science) has other various contributions of special value, and Mr. T. W. Kirk, of the Colonial Museum, has a long list of papers both on zoology and botany, all of them of novelty and interest, and several of them on such practically important subjects as Grasses and Fodder Plants. Other able workers in these departments are Mr. D. Petrie, Mr. W. Colenso, Mr. Charles Knight, Mr. Buchanan, and Mr. Buller. From Mr. J. C. Craufurd and Mr. W. Collie we have valuable contributions relating to the geology of New Zealand. Several of the papers classed under the head of *Miscellaneous* are of the greatest importance and interest. Thus we have papers of immense practical value to the colony on the Forest Question in New Zealand, by Mr. A. Lecoy; on the Influence of Forests on Climate and Rainfall, by Mr. F. S. Peppercorne; and on Forest Planting and Conservation, by Mr. G. W. Wilkins. Equally important from a colonial as well as a scientific standpoint is Commander Edwin's paper on the Principle of New Zealand Weather Forecast. We have several excellent papers on the New Zealand natives of much ethnological value: "Notes on Port Nicholson and the Natives in 1839," by Major Heaphy; "On the Ignorance of the Ancient New Zealanders of the Use of Projectile Weapons," by Mr. Coleman Phillips; "Contributions towards a Better Knowledge of the Maori Race," by Mr. W. Colenso; "Notes on an Ancient Manufactory of Stone Implements," by Prof. von Haast, F.R.S.; and "Notes on the Colour-Sense of the Maori," by Mr. J. W. Stack. Mr. W. Colenso contributes papers on the Moa, a subject of great scientific interest. Mr. J. H. Pope's "Notes on the Southern Stars and other Celestial Objects" is a valuable contribution to astronomy. Prof. Bickerton has several papers on subjects of wide scientific interest,—on "Partial Impact," the "Genesis of Worlds and Systems," the "Birth of Nebulæ"; while Prof. F. W. Frankland writes interestingly on "The Doctrine of Mind-Stuff." There are several good chemical papers by Mr. W. Skey. In the *Proceedings* of the several societies there are numerous shorter papers of varied interest, as on Moa Feathers, by Dr. Hector; on Musical Tones in the Notes of Australian Birds, by Mr. C. W. Adams; on a new fish, by Prof. Hutton; and many others on subjects of wide and varied interest. We have besides meteorological, earthquake, and other records, and a variety of miscellaneous matter, all of real importance.

An institution capable of producing so much valuable work year after year deserves every encouragement from the government of the country. The New Zealand Government has hitherto granted a subsidy of 500*l.* yearly to the Institute, just sufficient, we believe, to defray the expenses of printing the *Transactions*, which are freely distributed to other societies all over the world. We are therefore astounded to learn that the Government has decided to withdraw this grant, thus suddenly bringing these valuable *Transactions* to a standstill. We can scarcely credit the statement; it is difficult to believe that so enlightened a Government as that of New Zealand